that . . . this Flora will prove valuable to many successive classes of forest students and many successive forest officers whose duties may call them to the beautiful forests of the Dún and the splendid scenery of the adjoining Himalayan Mountains."

THE LAWS OF GEOGRAPHY.

Les Lois de la Géographie. 1er. Étude. Par Carlos de Mello. Pp. viii + 360. (Berlin: R. Friedländer und Sohn, 1902.) Price 10 marks.

SENHOR CARLOS DE MELLO, professor of geography at San Paulo, wields the pen of a ready and fearless writer, for he prefaces his volume of 360 pages on the laws of geography with the statement that it was written in two months, and the regret that it is consequently neither so clear nor so full as it might otherwise have been. "A short bibliography," he says, "concludes the work"; but since the bibliography occupies 224 pp. and the rest of the work only 136, we are inclined to think that the fact could be better expressed otherwise. Dedicated in Portuguese, written in French, printed and published in Germany, it is evident that the "laws of geography" are superior to the trammels of nationality or language. We were, in fact, unfavourably impressed by the preface, and it required some effort to approach the text with an open mind. On reading the chapters it soon became apparent that, however hastily the book was written, its preparation had required and had received years of thought, and study and wide reading. Even in the minor details of correct transcription of foreign names and the titles of publications, quite exceptional care must have been taken, for we have rarely seen a book so full of detail equally free from typographical errors.

The first of the "laws of geography" to be discussed is the law of asymmetry. It is pointed out how rarely parallelism is found in the larger features of the globe, how invariably (except in the case of Africa) a continent occupies a non-central position on its continental block, and how the relief of the continent itself displays a conspicuous dissymmetry, as in the position of the great plateaus of America. From this principle a series of laws of contrasts and harmonies is deduced with much ingenuity and confirmed to a considerable extent by the citation of examples. But even by the device of adopting asymmetry instead of symmetry as the standard of reference, it is impossible to avoid exceptions and contradictions. For example, in the "law of contrasts" which declares that the northern continents extend in the direction of the parallels and the southern continents in the direction of the meridians, the anomalous case of Australia is passed over without remark. We cannot help feeling that the author may possibly hold too precise and mathematical a view of symmetry in regard to the great features of the Earth's crust. It seems to us that broad features should be looked at broadly, and that on doing so the Earth's surface exhibits a rough symmetry in the alternation of height and hollow and the interlocking of ocean and continent. To a closer view, of course, the roughness appears more remarkable than the symmetry, but we have a suspicion that the symmetry is there as a dominant fact and the asymmetry only as a detail. We are by no means sure, however, that the author has not started with the idea of the symmetry of terrestrial features as self-evident, and therefore devotes his whole attention to the rectification of the broad principle in details.

Part ii. deals with the laws of mutual dependence of terrestrial forms, and considers the cases of the relation of rivers to valleys and of continents to oceans. It presents a number of relationships arrived at by many authors whose works were often separated by considerable intervals of time. Some of these have been accepted and incorporated in current views, others have been passed over and forgotten. We have not space to refer critically to these, or to inquire how far they agree with or contradict the recent systematic discussion of the relation of rivers to their valleys which has culminated in the geographical cycle of Prof. Davis; but we cannot let pass the opportunity of reviewing this thoughtful summary of a part of geographical theory without inquiring why it is that so much of the work of geographical theorists has passed unproductively into oblivion. The reason may perhaps be that an original mind devoted to purely geographical questions has only arisen at long intervals; the work of the predecessor has been forgotten or absorbed as a detail in other sciences before the successor has made himself heard. It may be that this is due to the absence from geography of the numerous less original workers who are attracted to the study of other sciences by prospects of gain, and, while unable to advance the science themselves, at least hand on the torch without extinction.

Whether this be so or not, the fact is beyond dispute that geography has not made the progress that it should have done; and, more particularly in this country, the geographer as such is scarcely recognised. Geographical questions have so frequently been treated as incidents in the course of geological, botanical, zoological or historical investigations that even the scientific world hesitates to accept geography as a subject deserving of the whole attention of a competent man. There are signs of improvement in this respect, it is true, and any improvement is matter for satisfaction. There is room for many books of the type of Prof. de Mello's, and it would be well if such books commanded many readers. The sympathetic attitude of the ancient universities to geography is a gratifying and hopeful circumstance, almost compensating for the inadequate or even retrograde steps of the newer academic centres. H. R. M.

OUR BOOK SHELF.

The Elements of Electrical Engineering. A First Year's Course for Students. By Tyson Sewell, A.I.E.E. Pp. xi + 332. (London: Crosby Lockwood and Son, 1902.) Price 7*s.* 6*d.* net.

THIS book, which is based upon courses of lectures delivered by the author, is primarily designed for students attending evening or other courses at the polytechnics. The course of lectures is more or less complete in itself, the necessary elementary theory being by no means neglected; the author, indeed, advises students to take a concurrent course in the scientific side of the subject, but such as are unfortunately unable to spare the necessary time will not, we think, find much in this book

which is beyond their comprehension. Undoubtedly, for a thorough training in electrical engineering the practical and theoretical sides of the subject must receive equal attention, but not all students can attend institutions where this is to be obtained. Many have of necessity to be satisfied with some sort of compromise, and one welcomes a book which is sound in its treatment and is admirably calculated to give such students the knowledge and information they most require.

Selection of some sort, when dealing with so large a subject, is of course necessary; the author has, we think, made a wise choice in the branches with which he deals and in the manner in which he treats them. These include, in addition to the general principles underlying the subject, batteries, accumulators, measuring instruments and supply meters, arc and incandescent lamps, and the continuous-current dynamo and motor. Particular apparatus is only described when it illustrates the general principles. Perhaps in a few instances there is a little too much detail, as, for example, in the description of the recording mechanisms used in meters. We would gladly see some of this matter omitted, and such branches as telegraphy, telephony and electrochemistry treated on broad lines instead. Mr. Sewell has the power of clear exposition, and has succeeded well in avoiding too mathematical treatment; the illustrations and diagrams are excellent. M. S.

The Force of Mind: or, the Mental Factor in Medicine. By A. T. Schofield, M.D., M.R.C.S., &c. Pp. xiv + 309. (London: J. and A. Churchill, 1902.) Price 5*s.* net.

IN this book, which is written for medical practitioners, Dr. Schofield appeals for a fuller recognition of the influence of the "mind" in causing and in curing disease of the body, and urges medical men to work for the reclamation of those waste and unmapped regions in which the religious fanatic and the quack doctor have hitherto been allowed to reign, occasionally producing, among much that is harmful, remarkable cures. He would have the subject taught and studied in the hospitals and great medical schools as a part of the regular curriculum of every medical student. There can be no doubt that the reforms advocated are much needed and that Dr. Schofield performs a useful service in thus pointing out the weak and neglected side of modern medicine. The author supports his contentions with many quotations from high authorities, both ancient and modern, and by the citation of numerous cases, and gives from his own experience many practical hints that should be valuable to practitioners. From the point of view of the psychologist, the book is vitiated throughout by the insistence upon the part supposed to be played by "the unconscious mind." This seems to be a figment similar in function to von Hartmann's "unconscious," *i.e.* it is a hypothetical agent to the activity of which is assigned all that is obscure and difficult of explanation in the workings of the nervous system. It is a radically vicious hypothesis because it is one that tends to baffle rather than to quicken the impulse to research. We are told that the phrase is not used merely to cover the more complex workings of the nervous system that are not accompanied by consciousness, and no reasons are assigned for rejecting this, which may now be called the generally accepted and intelligible view of the matter. The author seeks to support his position by quoting Dr. Bastian's plea, "Let us make mind include all unconscious nerve actions," and in so doing reveals the dire confusion of his own thoughts on this subject. He good-naturedly pokes fun at those who objectify "Nature" as a healing agent and then commits the same error, replacing "Nature" by the *vis medicatrix naturae*, which he identifies with the unconscious mind, and thus commits himself to the somewhat absurd dogma that such remedial processes as compensatory hypertrophy of the heart and phagocytosis are manifestations of the power of "the unconscious mind." Unless it can be shown, as at present it cannot be, that nervous activities and conscious processes together are inadequate to the explanation of all the facts of our mental life, the assumption of a third mysterious agent, call it "the unconscious mind" or "subconsciousness" or what you will, is much to be deprecated. W. McD.

Introductory Chemistry for Intermediate Schools. By Lionel M. Jones, B.Sc., A.R.C.Sc.(Lond.) Pp. vii + 195. (London: Macmillan and Co., Ltd.) Price 2*s.*

THE standard of this book is suitable for the junior classes of intermediate and secondary schools in which chemistry is used as a form subject, and the matter in it covers almost the same ground as that in the chemical part of Perkin and Lean's "Introduction to Chemistry and Physics." The treatment is rather different, as the historical side is not mentioned. The students are expected to have been taken through some course in physics or experimental science before they begin this course. It is important that they should have done so, as they are supposed to understand the balance, to weigh to milligrammes and to know the meaning of many physical terms.

The book opens with chapters on the description of bodies. Much attention should be given to this, as in a recent examination, when a fragment of Iceland spar was given for description, only a very small percentage of candidates recognised that definite shape was characteristic of the substance. Then follow chapters on simple operations, solution, evaporation, distillation. Afterwards come chapters on rusting, combustion, oxygen, hydrogen, chalk, coal and coal-gas, salt and salt-gas, and finally on acids and bases.

Some of the methods appear to us to be too elaborate for young children. There is, for instance, the complicated aspirator, which experience has taught the present writer is hardly ever clearly grasped. The correction for pressure is always a difficult point. Again, the students should never be allowed to make statements such as "1 litre of hydrogen weighs 0·09 gm." or "density of chalk-gas 0·00198 gm. per c.c." without stating definitely the temperature and pressure at which the weight or density has been ascertained.

We should have liked to have seen more attention given to the indestructibility and conservation of matter. This principle of chemistry cannot be grasped too early. Many of the elementary experiments are conducted with its tacit assumption, and we think it should be pointed out to the student. S. S.

Next to the Ground; Chronicles of a Country Side. By Martha McCullock Williams. Pp. xii + 386. (London: Heinemann, 1902.)

IN this dainty little volume, the author affords English readers a most interesting series of glimpses of the charms and passing events of everyday country life in the United States, after the fashion which so many writers have made familiar in England. A close observer of nature, and evidently imbued with the spirit that everything has an interest of its own, if looked at in the proper light, the author has hit upon a congenial subject, and treated it in a manner which affords an excellent example of the best style of "nature-teaching." The scene is laid in a southern county lying to the westward of the Alleghanies and eastward of the Mississippi, nearly midway between the mountains and the river; and whether describing ploughing with mules or oxen, discoursing of the quail, the partridge or the opossum, discussing shooting and fox-hunting or writing on horses, cows and pigs, the author is equally at home and equally interesting. Some of the information given, such